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FOREST SERVICE
Wasatch National Forest
SALT LAKE CITY, UTAH
OCT 16 1936
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Wasatch
S
Insect Control
Work Order #458-468-468-470

Salt Lake City, Utah
October 14, 1936

F.S. R-4
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Timber Management

FALL SURVEYS - 1936

The fall insect control surveys on the Wasatch National Forest were designed to be a check on the previous years control projects and were limited to include areas on which bark beetles were occurring in epidemic proportions during the surveys or inspections the previous year. Observations on other areas revealed that the beetles are in much the same status as last year insofar as an increase in their proportions is concerned and that we were correct in assuming that no further control measures or surveys were necessary this year.

The abundant amount of precipitation received in the mountainous country of the Wasatch this season has played an interesting part in the history of our bark beetle infestations as shown by the survey notes. This is displayed by:

1. An increase in the percentage of trees containing pitched out attacks. This has been true not only in lodgepole pine, but in Douglas fir, White fir and Alpine fir.

2. Attacks being made in weaker trees (over-mature, mistletoed, trees with insufficient crown to carry on normal physiological activity) and in trees attacked during the 1935 flight season. This latter condition was noticeable to a small extent last year.

In addition to the regular data of amount of cruise, new attacks and timber type, taken in the lodgepole pine surveys, the infested trees were classified into four groups, namely; A - attacks heavy, above twenty feet in height, B - attacks under twenty feet, C - one sided attacks, and D - pitched-out attacks. An average of these four groups revealed the following percentages for each class of attacked tree as against the figures obtained from last year's survey.

Percentage

Class	1936	1935
A	31	17
B	39	25
C	6	40
D	24	18

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There is noted an increase in the percentages of the A and B group over last year and a proportionate decrease in the one sided attack group. These deviations from the 1935 figures are attributed to the preference of the beetle for the over-mature and other weaker trees, to the filling in of infestations in trees attacked last year, and to the complete filling in of most attacked trees. There are fewer attacked trees, but with much heavier attacks. This will necessitate the felling of larger number of trees during the treating operations.

Survey Procedure

The first surveys of the season were carried out on the Salt Lake and American Fork Districts from August 21st to August 13th. The infestations of the White Fir Beetle, Scolytus ventralis, and the Alpine Fir engraver, Dryocoetes confusus, on those two districts have been building up during the last three years and have been of considerable importance because of the destruction of trees surrounding important recreational areas, particularly the Aspen Grove and Timpanogos Cave areas on the American Fork district and the Brighton and Mill Creek areas on the Salt Lake district.

American Fork District- WO #468

Surveys were confined to the Aspen Grove area that has been showing increasing infestation for the last two years, to the Timpanogos Cave area on which treating against the beetle Scolytus ventralis in White Fir was a project of the American Fork WPA camp last winter and to the Dry Canyon area also heavily infested last winter but on which no treating was done.

The approximately 100 acres of timber in the Aspen Grove area were shown by survey estimate to include about 350 newly attacked trees and also some trees from which last year's late broods had not emerged. A fall control project is already initiated on this area, and complete control can be obtained since this body of timber is rather isolated from other infestations.

The method of quarter acre circular plots were used in making the estimate on this area. This method is more satisfactory because infestations in White Fir cannot be determined without a careful inspection of each individual tree.

Infestations in the large body of White Fir timber on the Timpanogos Cave National Monument area were found to have been satisfactorily put under control, and it is believed that by small effort the losses of this valuable timber can, in the future, be kept at a minimum.

(a)

Survey Expenditure

Salary:

Farmer	$11.10
CCC	2.00
Motor fuel . . .	1.40
Total	$14.50

Salt Lake District WO #469 - 470

An infestation of the Alpine Fir beetle appears to be taking on epidemic proportions in the Brighton area and has already destroyed a large number of trees surrounding some of the summer home there. Considerable infestation is also appearing on the mountain sides to the east and the northwest of the main camping area. Our chief concern on this area is of course the trees on the camping areas and since most of the infested material has already been removed, and treated by CCC workers, no further work is recommended until it can be determined by another year's survey whether the infestation will continue at its present rate of increase.

The only other barkbeetle infestation of importance was found in Mill Creek Canyon. Control measures have already been taken on the area recommended for treatment.

Infestation on the Davis County addition were by secondary insects and of no concern at present.

The Maple borer, Agrilus politus, infestation that gave us some alarm last year is greatly reduced and appears to be on the decline. I believe the heavy parasite population is the principal reason. No control measures are recommended other than cutting the trees killed by this year's broods, and barking them for camp stove use.

(b)

Survey Expenditure

Salary:

Farmer	$22.20
Stevens . .	4.00
Motor fuel . .	2.94
Total	$29.14

Kamas District WO #458

Persistent control operations in the large bodies of lodgepole pine timber have finally resulted in a reduction of the mountain pine beetle on this district to endemic proportions. It is believed that from this point in the control

history, a minimum effort will suffice to keep down any tendency toward a rising infestation. There will be no reason for any further infestations such as those that have prevailed on the Kamas District since 1930. The increased timbering operation on this district will constitute an important factor in the control of future infestations since roads are contemplated into the two largest bodies of timber that have previously been of only small economic value because of their relative inaccessibility.

A small epidemic infestation covering about 160 acres of timber and containing an estimated 75 newly infested trees remains to be treated on the Weaver Unit. This area borders the trail up the east fork of Upper Sitting Creek and treatment of it will be included in the fall operation. This operation will also include the treatment of whatever other scattering infested trees there are, that can be located.

The map accompanying this report shows the infested area.

Grandaddy District WO #458

Epidemic infestations on the Iron Mine area of the Duchesne control unit have been more tenacious than any other infestation on the forest, but they are now confined to the area outlined on the accompanying map. Because of the comparative isolation of this area, the rocky, rough terrain, and the difficulties incurred in the transportation of oil, treatment has not been thorough during the years of 1934, and 1935, so that although the entire infestation has been covered by treating, there has been a building-up of infestation on the previously treated areas, some of which has extended into untreated timber. A good pack trail has been developed into this area from the Provo River side and the camp to be established this fall in the Iron Mine area, should be able to give the final thorough treatment necessary to clean up this remaining epidemic.

Check surveys in Rock Creek and the Fish Creek drainages covered by control crews during the fall of 1935 reveal no further need for control measures in these areas.

The infestation of Douglas fir beetle at the end of the Rock Creek road is in much the same status as last year. The area of approximately 80 acres from which the mature, merchantable timber has been sold is in a deplorable silvicultural condition as stated in the annual report on insect infestation for 1935. The selected remaining stand is extremely unhealthy, and is mostly heavily mistletoed. About 1/12 of this stand is infested with consociations of the

Douglas fir beetle D pseudotsugae and the Douglas fir engraver Scolytus unispinosus.

The work order issued for treatment in this stand is to remove the Douglas fir beetle infested material and also all the mistletoe infected trees. This will call for the removal of, or girdling of all but the young reproduction on the area that does not contain mistletoe infection. Water treatment is recommended for control of the bark beetles in the late spring and early summer when the new infestations have taken place. Handling of the logs at this stage of infestation will insure treatment of all the beetles because there will be no stuffing of bark and resulting escape of mature beetles. Treatment can thus be accomplished during fire season.

A Douglas fir cone moth has been abundant on the area and as a result the seed crops have been poor. There are, however, sufficient seeds in the duff and soil to produce a new crop of timber when the ground has been cleared. Planting can be done, if necessary.

(c)

Survey Expenditures

Salary:

Farmer . .	$83.33
Rowley . .	67.50
Rampton . .	50.00
Stevens . .	60.00
Motor fuel . .	2.11
Total	$262.94

Respectfully submitted - October 14, 1936

Lowell J. Farmer

Lowell J. Farmer
Junior Entomologist

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SUMMARY OF INSECT SURVEY

TIMBER TYPE
Lodge Pole

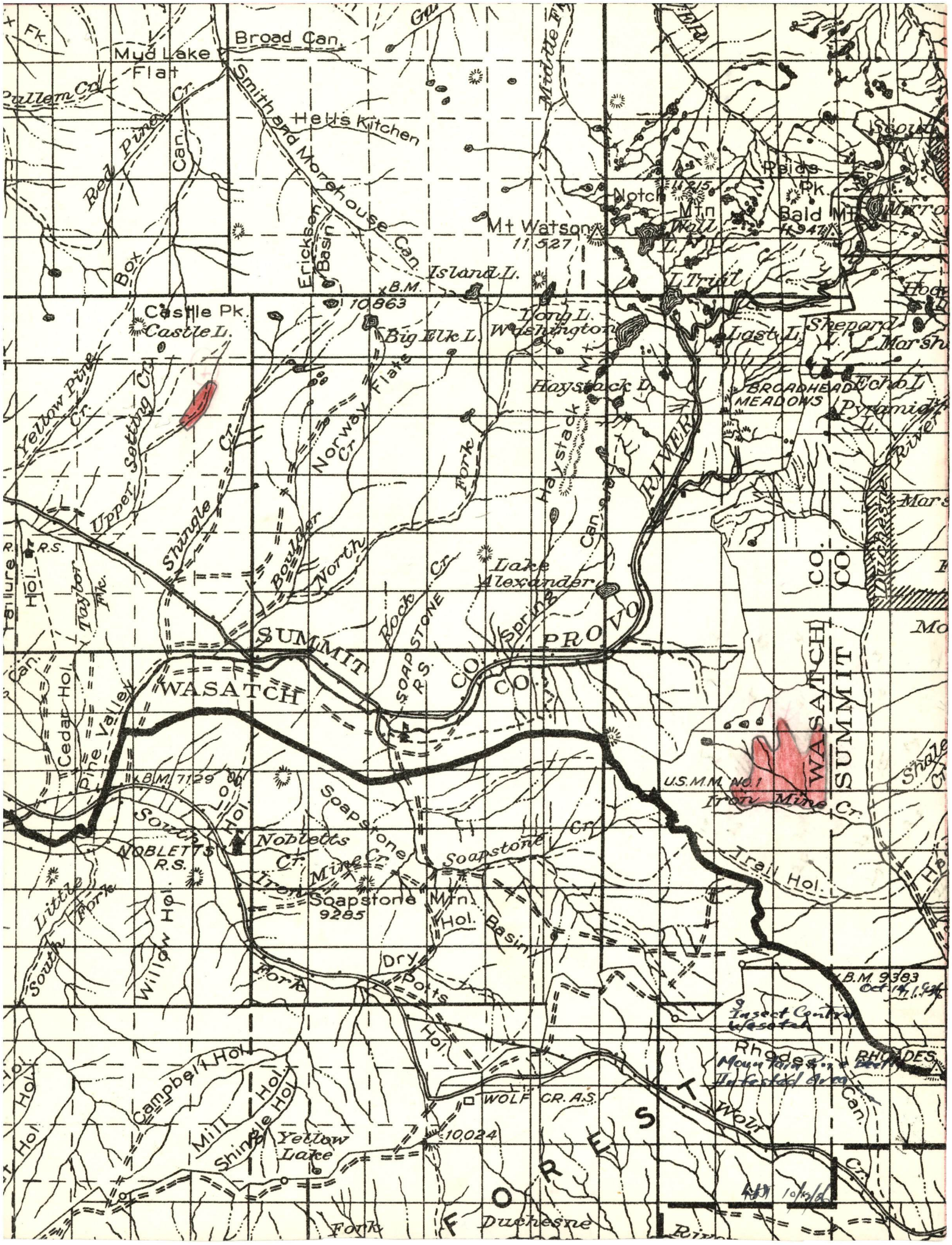
INSECT CAUSING DAMAGE
D. Monticolae

WASATCH NATIONAL FOREST

Sept. 10th to 16th 1936
Date of Cruise

Forest Supervisor

UNT. No.	Name	% of Cruise	No. Trees treated Spring Fall	Year	No. of New att'k	% of New Attacks	Character	Acres T. Spring Fall Yr.	Acres to be treated Spring Fall Yr.	ESTIMATED COST OF TREATING TOTAL	Per A.	Per Tree
	Duchesne	2½%	(F)1935	392	500	38.5	B.	(F) 1935 1920	Fall 1936 960 acres	$500.	$.525/80	$1.
	Beaver Creek	2½%	(S)1936	79	75	94.9	B.	(S) 1936 100	Fall 1936 100 acres	$ 50.	.50	.67


Broad Can.
Myd Lake Flat
Smith and Morehouse Can.
Hell's Kitchen
Red Pine Can.
Box
Ericksen Basin
Mt Watson 11,527
Island L.
B.M.
10,863
Castle Pk.
Castle L.
Big Elk L.
Long L.
Washington
Last L.
Shepard L.
Haystack Mt.
Haystack L.
BROADHEAD MEADOWS
Echo L.
Pyramid L.
Yellow Pine Cr.
Upper Stringtown Cr.
Norway Flats
Stringtown Cr.
Boulder Fork
North Fork
Can.
RIVER
Lake Alexander
Rock Cr.
Spring
SUMMIT CO.
PROVO
WASATCH
SUMMIT CO.
WASATCH
Soapstone R.S.
Cedar Hol.
Pine Valley
B.M. 7129
Soapstone Cr.
Noblett's R.S.
Noblett's Cr.
Iron Mine Cr.
Soapstone Mtn. 9285
Soapstone Basin
Trail Hol.
U.S.M.M. No. 1 Iron Mine
Little South Fork
Willow Hol.
Dry Fork
Potts Hol.
B.M. 9383
Insect Control Research
Rhodes
RHODES
Mountain Meadows Farm
Campbell Hol.
Mill Hol.
Shingle Hol.
WOLF CR. A.S.
10,024
Yellow Lake
FOREST
Duchesne
Fork